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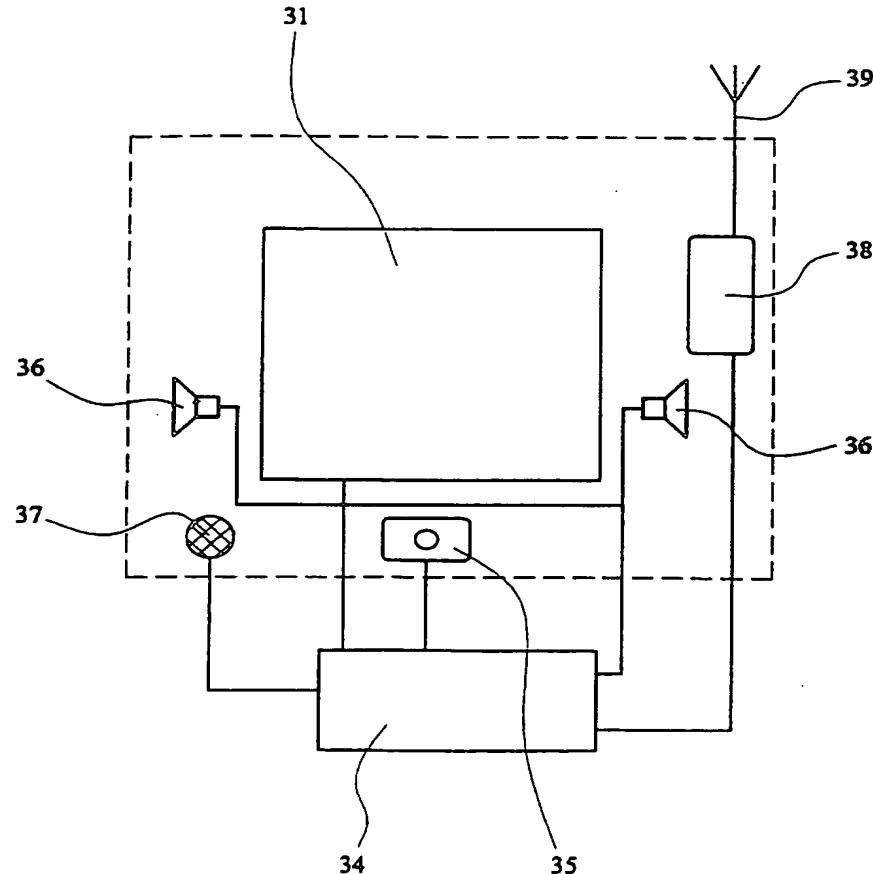
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(54) Title: PRESENTATION DEVICE



(57) Abstract: A presentation device (1) is disclosed, which is preferably in the form of a briefcase. The device includes a display (31) which is built into a lid portion and faces outwardly. The device further includes a transceiver (38) for the reception of data from a mobile phone network. The device includes means for decoding the data and transforming it into presentation data for display. The device may suitably utilised for video conferencing or simply keeping in touch with the office when an executive is away on business.



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PRESENTATION DEVICE

The invention concerns a presentation device and, in particular, relates to certain improvements to the type of 5 presentation device disclosed in PCT application WO98/52116, by the present applicant.

Figures 1 and 2 show a first embodiment of a presentation device of the type disclosed in the aforementioned PCT 10 application.

Referring to Figures 1 and 2, the presentation device 1 shown in Figure 1 comprises a container 2 having a lid 3 and base 4. The container 2 is a briefcase. The lid 3 and 15 base 4 are connected by a hinge 5 (shown dotted) enabling the lid 3 to be rotated with respect to base 4 between open and closed positions. Supports 6 connected between the lid 3 and base 4 are for maintaining the lid 3 in the open position. Other support methods may be used.

20

A portion of the lid 3 of the container comprises a first display device in the form of an electronic display 7. The electronic display 7 may be a liquid crystal display or any other suitable display. The electronic 25 display 7 is fixed within the container lid 3 internally and is viewed from the exterior.

A leg 8 is hingedly attached to the base 4 preventing the presentation device 1 from overbalancing if the 30 electronic device 10 is removed. Preferably, the leg 8 is arranged to deploy automatically upon opening the lid 3.

Located within the base 4 is an interconnector 9 (not shown in Figure 1 or 2 - shown schematically in Figure 3). One portion of the interconnector 9 is connected to the electronic display 7. A further port of the interconnector 5 is connected to an electronic device 10. Connections (not shown) for a camcorder and VHS players are also provided. The electronic device 10 is a portable computer having a second display device in the form of electronic display 11. The portable computer can be disconnected from the 10 interconnector 9 and removed from the presentation device 1. The personal computer could be replaced by a different electronic device 10 for creating images to be displayed on the external display 7.

15 An external port 12 of the interconnector 9 extends through the external wall of the container 2. Such an external port 12 may be utilised for connection to additional peripherals (not shown). The external connector 12 is a PCMCIA type interface. The interconnector 9 has 20 additional connection ports for connection to additional peripherals located within the base 4. Located within the base 4 and attached to the interconnector 9 is an independent power supply 13 (shown dotted). The independent power supply 13 can be disconnected from the 25 interconnector 9 and replaced by a transformer for transforming mains power to the correct voltage to power the external display 7. Additionally, the transformer can be connected to a further port of the interconnector 9 and can simultaneously recharge the independent power supply 30 and power the external display 7.

Shown in Figure 2 is the presentation device 1 in the closed position. A cover 14 covers the electronic display

7 protecting it from damage during transport. The cover 14 is held in place by fastenings 15 and 16. The fastenings 15 and 16 are connected to the container 2 by fasteners 17. In order to remove the cover 14, the fastenings are 5 disengaged from the container 2. The cover 14 may then be disengaged and removed.

In order to use the presentation device 1 of figures 1 and 2, the container 2 is arranged in its open position 10 with the base supported by a table or other horizontal flat surface. The container 2 is unlocked and the lid rotated about the fastenings 15 until it is perpendicular to the surface. Peripherals are then attached to the interconnector 9 in the required configuration. Once the 15 interconnector 9 has been connected to a power source (either the independent power source 13 or a transformer which is in turn connected to the mains) the presentation device 1 is activated.

20 Once activated the electronic device 10 creates an image to be displayed on the electronic display 7. This image is sent to the interconnector 9. On receipt of the image the electronic display 7 displays the image to the audience. A second copy of the image may be displayed on 25 the second electronic display 11.

This device may also show presentations when the device is closed.

30 By touching the second electronic display 11 or other input device of the electronic device 10 the user may change the image displayed on both displays 7, 11. The input device may also include a mouse. It will also be

appreciated that the device may include the capability of connection to and of being controlled by items not having a further (second) display.

5 The interconnector 9 may transmit peripheral control signals from the electronic device 10 to the peripherals or vice-versa. The electronic device 10 may then synchronise the action of peripherals, (for example, a sound generator) with the presentation of the display 7.

10 Although the abovementioned device is extremely practical, the improvements to the device disclosed in the present application are intended to reflect the move towards providing a complete solution to the travelling executives
15 needs. Previously, if an executive were to leave his normal office to travel out and see clients, that executive would need to carry a briefcase containing documents which might be required, a mobile phone, a laptop computer and, if a presentation were to be given to
20 clients, would also need to ensure that at the client end a suitable overhead projector etc. was available.

The aforementioned PCT application partially addressed the needs of the mobile executive by providing a device in
25 which a lap top computer and paper work could be carried, the device doubling up as both a briefcase and presentation device.

30 The device disclosed in the PCT application mentioned above, generally anticipates the use of a lap top or palm top type computer to support a presentation being run on the device. However, developments in technology have

meant that the processing power required for running presentations has reduced.

An area of need which has been identified by the
5 applicants is that of the mobile executive working within the new infrastructure of mobile telephones that are able to handle voice, data and video anywhere in the world. Such integration has never before been utilised in presentation devices of the type envisaged.

10

With the above in mind, an aspect of the present invention provides a presentation device comprising: a container having a lid and a base; a first display device; means for driving the first display device, said first display device
15 being provided built-in to the lid of the container and arranged, in use, to face outwardly ;and a transceiver capable of receiving data from a mobile phone network.

Preferably, the transceiver comprises a data processing
20 unit for converting data received from the mobile phone network into presentation data.

By providing the presentation device with the hardware and software necessary to integrate an effective mobile phone
25 within the presentation device, the need for an executive to carry a separate phone can be avoided. However, there are further advantages in that by integrating mobile phone within the presentation device, the mobile phone can be operated without need to have the transmitter next to the
30 ear of a user, thus overcoming possible health hazards.

Furthermore, the transceiver may be provided with a retractable antenna conveniently located on the

presentation device so as to increase the range of the transceiver for a given output/input power.

The device may further comprise a keyboard
5 incorporating a wireless link between the keyboard and a controller of the presentation device.

The wireless link is preferably by means of an infrared link or by use of radio frequency systems (such 10 as one known as "bluetooth").

The device may further comprise: a video camera and being arranged for co-operation with the transceiver to permit a remote video link to be established.

15 The screen of the presentation device may be utilisable as a display screen for showing participants in a video conferencing mode.

20 The device may further comprise a retractable keyboard, the keyboard being positioned at the bottom of the container such that in a first configuration the keyboard is secured within the container and, in a second configuration, the keyboard is adapted to protrude from a 25 spine of the container and to sit underneath the first display of the presentation device, when the presentation device is in the open configuration.

30 There may be provided a safety latch which may only be operated when the container is open, the safety latch being arranged so as to inhibit the keyboard from sliding out of the case accidentally or from being pulled from the case when the container is closed.

The keyboard is preferably provided with a sliding mechanism to allow it to slide out of the container when the container is opened and the latch operated.

5

The spine of the container may be provided with a waterproof seal such that, when the keyboard is fully retracted, water is unable to pass between an exposed end face of the keyboard and an aperture formed in the spine
10 for receiving said keyboard.

According to a second aspect, the present invention provides a presentation device comprising:

15

a container having a lid and a base;

a first display device;

20 means for driving the first display device, said first display device being provided built-in to the lid of the container and arranged, in use, to face outwardly; and

25 an integrated processing and storage unit for storing presentation data for output to the means for driving the first display device and for controlling output of the presentation data, delivery of said presentation data being controllable by means of forward/back commands to progress a presentation being run on the presentation
30 device by incremental amounts in both forward and backward directions.

Preferably, the integrated unit includes forward/back buttons.

Preferably, the unit is arranged to accept a memory card
5 on which presentation information is stored. The integrated device may alternatively/additionally include a CD Rom port input.

By providing control of a presentation using simply a
10 back/forward (or up/down) button, extreme user friendliness is provided as no knowledge of computer technology is required by an operator. When the operator decides to present a presentation to an audience the presentation device is simply opened up and the screen
15 oriented to face the potential audience, the integrated module being connected to the presentation device and, as soon as power is applied, the presentation is ready to run by means of the two button operation.

20 A different presentation may be provided by providing different memory cards or CD Rom inputs etc. The presentations themselves can be developed and assembled in a desk top PC, a work station, a lap top or other such devices and then loaded onto a PC card for use with the
25 integrated module. With the storage capacity of existing and developing PC cards, such presentations can be very sophisticated and lengthy and can include video clips, other images and sound.

30

In another aspect of the invention, a presentation device is provided comprising: a container having a lid and a

base; a first display device; means for driving the first display device, said first display device being provided built-in to the lid of the container and arranged, in use, to face outwardly ;and a keyboard incorporating a wireless 5 link between the keyboard and a controller of the presentation device.

Also, a wireless mouse connection may be provided.

10 Such a wireless link may be by means of an infrared link or by use of radio frequency systems (such as one known as "bluetooth").

In accordance with yet another aspect, the presentation 15 device comprises: a container having a lid and a base; a first display device; means for driving the first display device, said first display device being provided built-in to the lid of the container and arranged, in use, to face outwardly ;and a video camera linked in with mobile phone 20 technology to convert the presentation device into apparatus which is suitable for video conferencing.

In this way, the screen of the presentation device may be used as a display screen for showing participants in the 25 video conference.

In accordance with yet another aspect of the invention, there is provided a presentation device comprising: a container having a lid and a base; a first display device; 30 means for driving the first display device, said first display device being provided built-in to the lid of the container and arranged, in use, to face outwardly ;and a retractable keyboard, the keyboard being positioned at the

bottom of the container such that in a first configuration the keyboard is secured within the container and, in a second configuration, the keyboard is adapted to protrude from a spine of the container and to sit underneath the 5 first display of the presentation device, when the presentation device is in the open configuration.

In this way, the presentation device may be utilised in the same way as a mobile PC.

10

The presentation device is preferably in the form of a briefcase.

Preferably, there is provided a safety latch which may 15 only be operated when the container is open, the safety latch being arranged so as to inhibit the keyboard from sliding out of the container accidentally or from being pulled from the case when the container is closed.

20 Preferably, the keyboard is provided with a sliding mechanism to allow it to slide out of the container when the container is opened and the latch operated.

Preferably, the spine of the container is provided with a 25 waterproof seal such that, when the keyboard is fully retracted, water is unable to pass between an exposed end face of the keyboard and an aperture formed in the spine for receiving said keyboard.

30 For a better understanding of the invention, and to show how embodiments of the same may be carried into effect, reference will now be made, by way of example, to the accompanying diagrammatic drawings in which:

Figure 1 is a perspective view of the presentation device described in WO98/52116 with the container in the open configuration;

5

Figure 2 is a perspective view of the presentation device of Figure 1 in the closed configuration with a cover covering the display;

10 Figure 3 shows an embodiment of an integrated module which may be used in conjunction with the prior art device in accordance with a first aspect of the invention;

15 Figure 4 illustrates the architecture of a presentation device utilising the integrated module of Figure 3;

20 Figure 5 shows an arrangement by which a presentation device 30 incorporating it's own controller may be utilised with an independent integrated module such as that shown in Figure 3 and 4;

25 Figure 6 shows an alternative configuration in which such an integrated module of the type shown in Figures 3 and 4 is actually presented as a part of a presentation device as a fully integrated unit;

Figure 7 shows a further embodiment of the presentation device of the present invention; and

30 Figure 8 and 9 are external views showing the appearance of an integrated presentation device having all of the features shown in Figure 7.

In the disclosure below, where like reference numerals to those used in Figures 1 and 2 are utilised, like or similar components are designated.

5 Figure 3 shows an integrated module which may be used in conjunction with the prior art device of Figures 1 and 2 for controlling the progress of presentations.

10 The integrated module 18 comprises a case 180, forward/back buttons 19,20 a CD ROM port input 21, a memory card visual and audio digital data input 22, and a connector 23 for connection of the integrated module 18 to the presentation device.

15 In use, the integrated module 18 of Figure 3 is arranged to receive presentation information in memory card form or in CD ROM form, the presentation information having been prepared in advance on, for instance, a PC memory card.

20 When an appropriate memory card or CD ROM is present within the integrated module 18, and when the connector 23 is connected to the presentation device, the up/down (or forward/back) buttons 19, 20 are active such that depressing the forward button 19 causes the presentation 25 to proceed in a normal forward fashion, whilst pressing the back button 20, causes the presentation information to scroll in a backward direction. The advantages of this simple two button interface are that a user need not necessarily have any knowledge of computers or indeed any 30 familiarity with the device at all, prior to running any presentations.

Referring now to Figure 4, there is shown the architecture of a presentation device utilising the integrated module 18 of Figure 3. In Figure 4, there is shown in a schematic fashion CD Rom port 24, memory card visual and 5 audio digital data port 25, a visual and audio data processor 26 for processing presentation information from either of the ports 24,25 , and an output connection 27 for connecting the integrated module to a main body of the presentation device (shown schematically by reference 10 numeral 30). Figure 4 also shows optional modules of a remote wireless control 28 and an analogue output 29 for visual and audio data. The optional remote wireless control 28 , may be used to allow the operator to control the forward and back functions whilst, for instance, 15 walking around a room and demonstrating other aspects as part of an integrated presentation and the optional video and audio analogue data may be used for driving an auxiliary presentation device if required.

20 Referring now to Figure 5, there is shown an arrangement by which a presentation device 30 incorporating it's own LCD panel and controller 31 may be utilised with an independent integrated module 18 such as that shown in Figure 3. In this illustration, there is shown a CD ROM 25 24 which connects with the integrated module 18 and a mouse or infrared mouse 32 connecting with the module 18, the module 18 having compact flash capabilities 33.

In Figure 6, there is shown an alternative configuration 30 in which such an integrated module 18 is actually presented as a part of the presentation device as a fully integrated unit.

Referring now to Figure 7, there is shown an embodiment which incorporates modules for satisfying all the needs of a fully mobile executive. The device includes LCD panel 31, a palm top computer 34 with on-board mobile phone software capabilities, a camera 35 for mobile video conferencing, speakers 36, a microphone 37, transceiver 38 and retractable antenna 39.

Figure 8 and 9 are external views showing the appearance 10 of an integrated presentation device having all of the features shown in Figure 7.

Referring now to Figures 8 and 9, there is also shown a retractable keyboard 40. The keyboard 40 is arranged to 15 only be able to be set in an in-use position (as shown in Figure 8) when the presentation device in the form of a briefcase is open. Ensuring that this is only possible when the briefcase is open, may be provided by a simple latch (not shown) which is only accessible from the 20 interior of the briefcase and which secures the keyboard 40 inside the briefcase. The retractable keyboard 40 preferably runs on rails (not shown) so as to protrude from a spine 41 of the briefcase when the latch is deactivated.

25

Also shown in Figures 8 and 9 is a seal area 42 defining an aperture from which the keyboard 40 is arranged to emerge. Around the seal area 42, a waterproof seal (not shown) is provided so as to protect the interior of the 30 briefcase from ingress of water, when the keyboard 40 is in the retracted position.

The keyboard 40 may be removable and may, for instance, communicate with a processor module of the presentation device by wireless technology such as a Bluetooth or other wireless connection.

5

It will be appreciated that the arrangements in each of the figures may have their aspects combined such that, for instance, the device of figures 8 and 9 may include the integrated unit 18 of figure 3 etc..

10

The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and 15 which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

All of the features disclosed in this specification 20 (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

25

Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated 30 otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

The invention is not restricted to the details of the foregoing embodiment(s). The invention extend to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, 5 abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

CLAIMS

1. A presentation device comprising:

5

a container having a lid and a base;

a first display device;

10 means for driving the first display device, said first display device being provided built-in to the lid of the container and arranged, in use, to face outwardly; and

15 a transceiver capable of receiving data from a mobile phone network.

2. The device of claim 1, wherein the transceiver comprises a data processing unit for converting data received from the mobile phone network into presentation data.

20
3. The device of claim 1 or 2, wherein the transceiver is provided with a retractable antenna conveniently located on the presentation device so as to increase the range of the transceiver for a given output/input power.

4. The device of claim 1, 2 or 3, further comprising a keyboard incorporating a wireless link between the keyboard and a controller of the presentation device.

30

5. The device of claim 1, 2, 3 or 4, wherein the wireless link is by means of an infrared link or by use of radio frequency systems (such as one known as "bluetooth").

6. The device of any preceding claim, further comprising:

a video camera and being arranged for co-operation
5 with the transceiver to permit a remote video link to be
established.

7. The device of claim 6, wherein the screen of the
presentation device is utilisable as a display screen for
10 showing participants in a video conferencing mode.

8. The device of any preceding claim further comprising a
retractable keyboard, the keyboard being positioned at the
bottom of the container such that in a first configuration
15 the keyboard is secured within the container and, in a
second configuration, the keyboard is adapted to protrude
from a spine portion of the container and to sit
underneath the first display of the presentation device,
when the presentation device is in an open configuration.

20

9. The device of claim 8, wherein there is provided a
safety latch which may only be operated when the container
is open, the safety latch being arranged so as to inhibit
the keyboard from sliding out of the container
25 accidentally or from being pulled from the container when
the container is closed.

10. The device of claims 8 or 9, wherein the keyboard is
provided with a sliding mechanism to allow it to slide out
30 of the container when the container is opened and the
latch operated.

11. The device of claim 8, 9 or 10, wherein the spine of the container is provided with a waterproof seal such that, when the keyboard is fully retracted, water is unable to pass between an exposed end face of the keyboard 5 and an aperture formed in the spine for receiving said keyboard.

12. The device of any preceding claim, further comprising an integrated processing and storage unit for storing 10 presentation data for output to the means for driving the first display device and for controlling output of the presentation data, delivery of said presentation data being controllable by means of forward/back commands to progress a presentation being run on the presentation 15 device by incremental amounts in both forward and backward directions.

13. The device of claim 12, wherein the integrated unit includes forward/back buttons.

20

14. The device of claim 12 or 13, wherein the unit is arranged to accept a memory card or other data carrier on which presentation information is stored.

25

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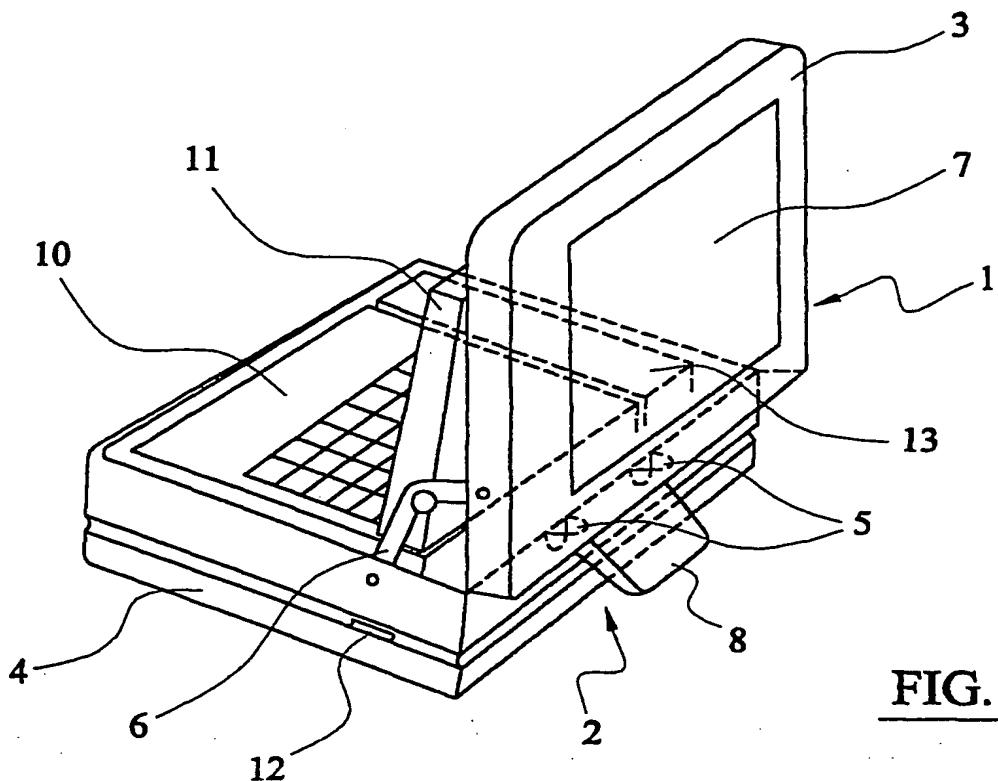


FIG. 1

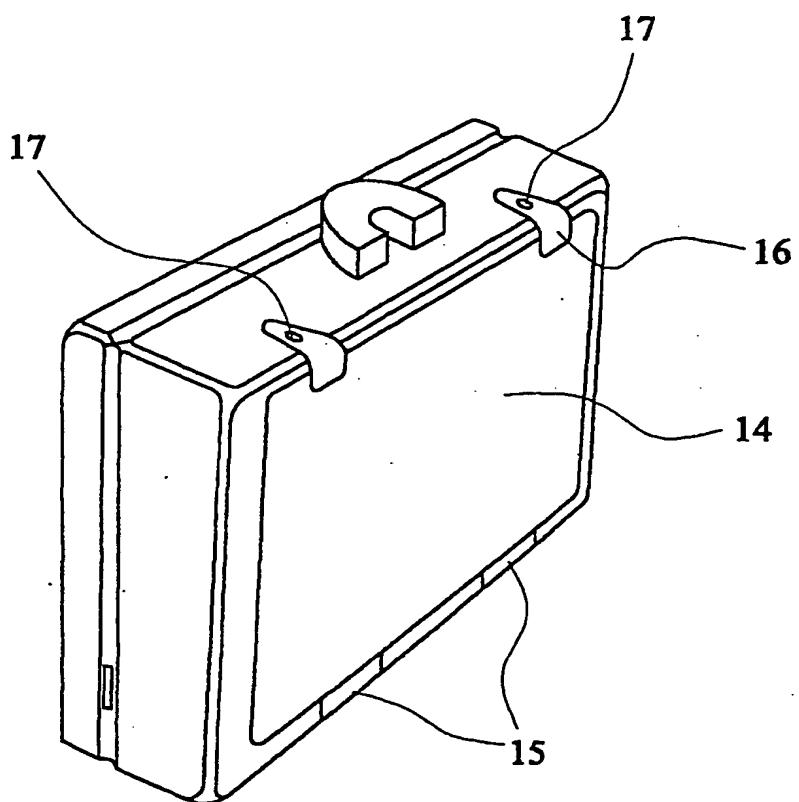


FIG. 2

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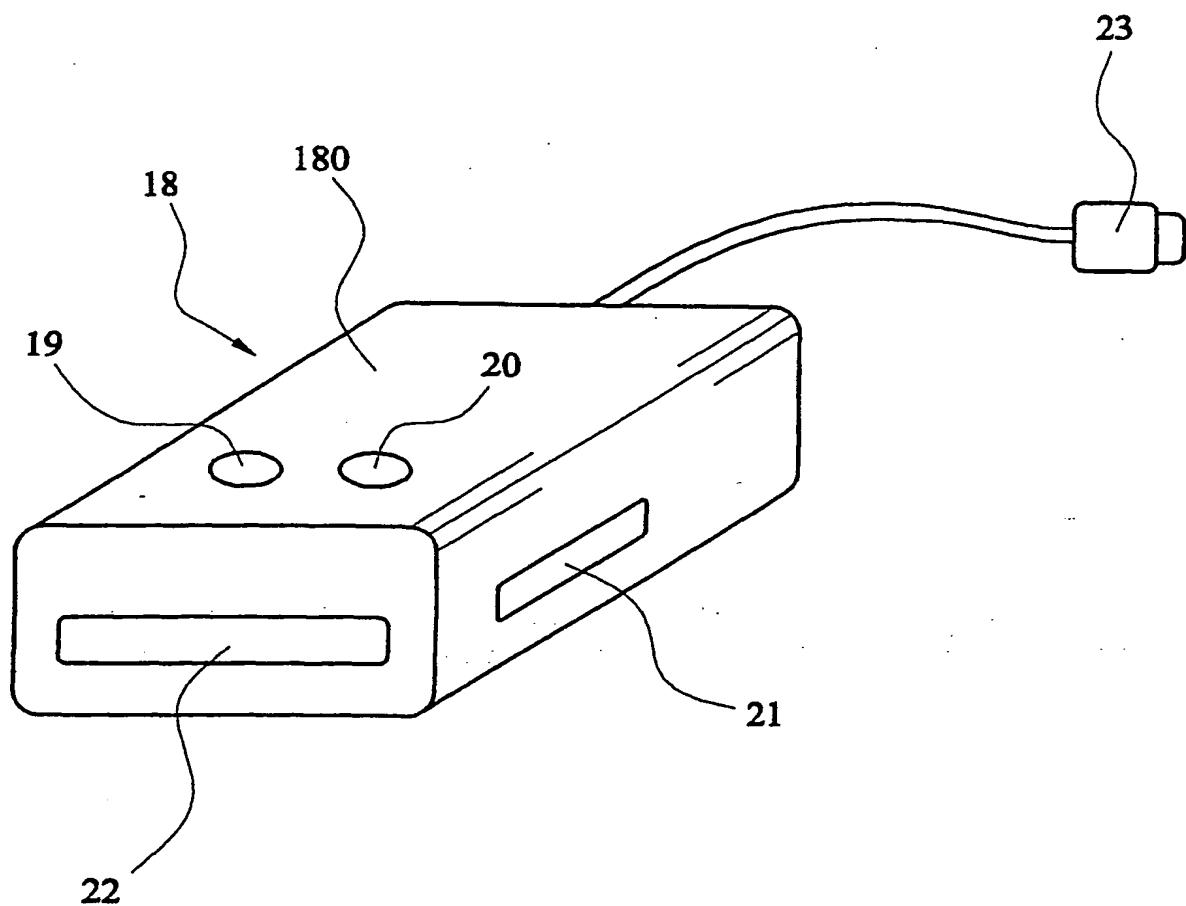


FIG. 3

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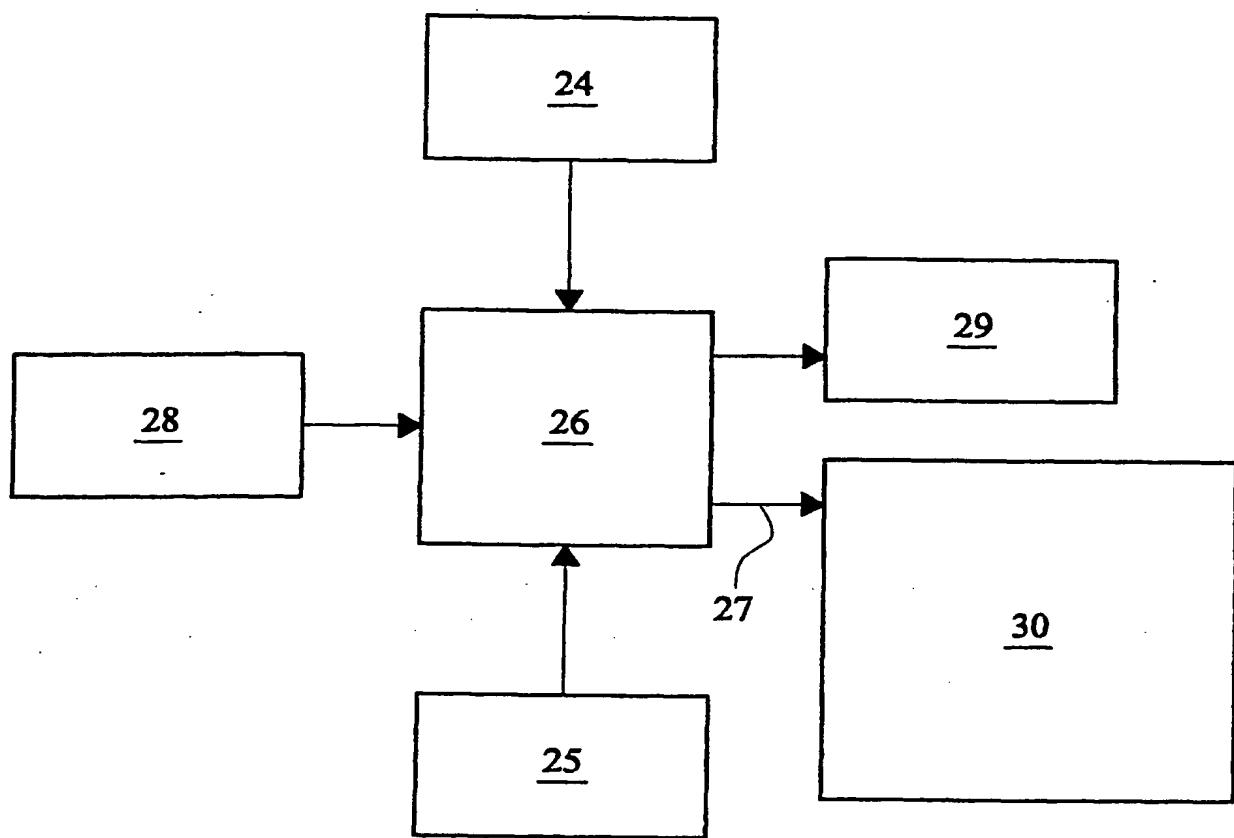


FIG. 4

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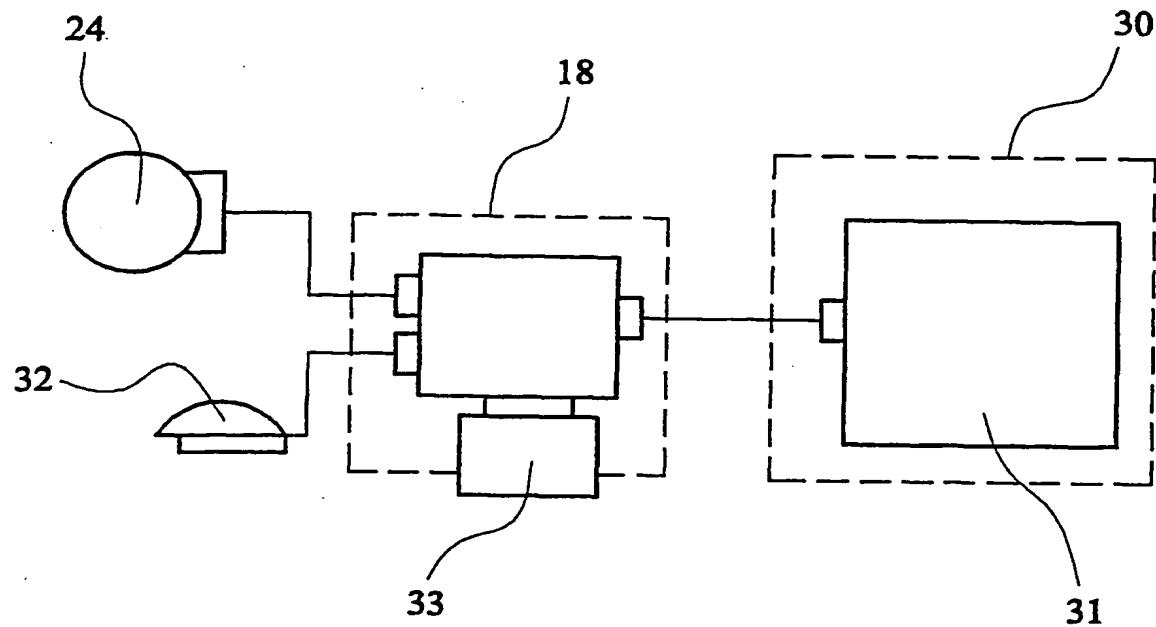


FIG. 5

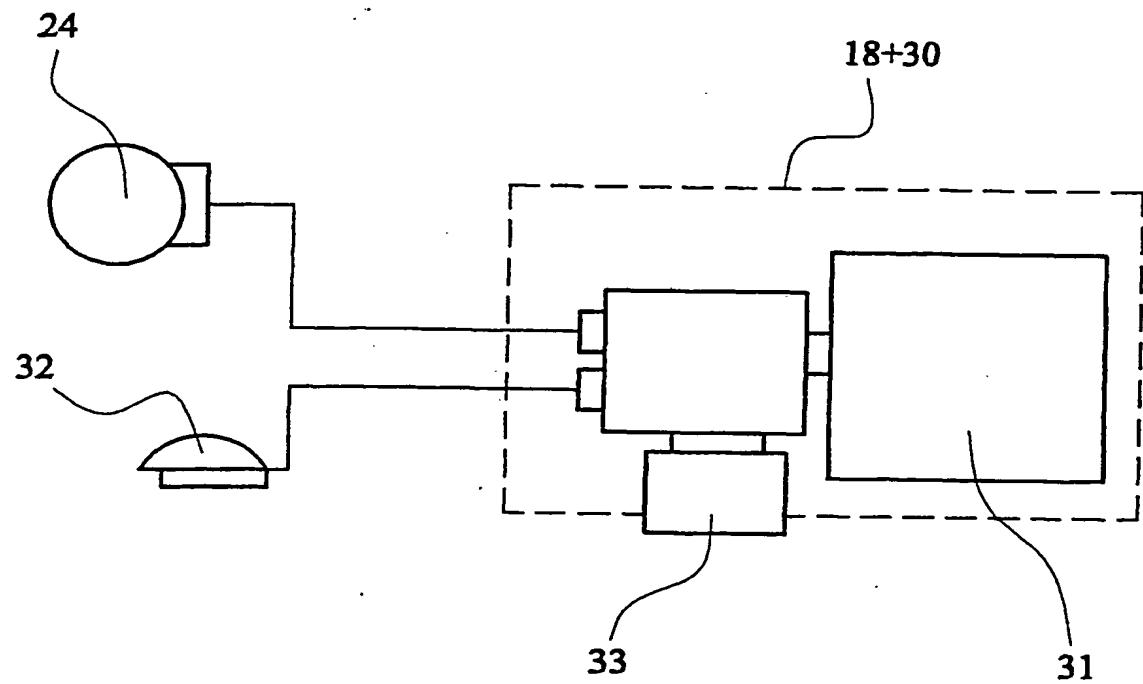


FIG. 6

-5/6-

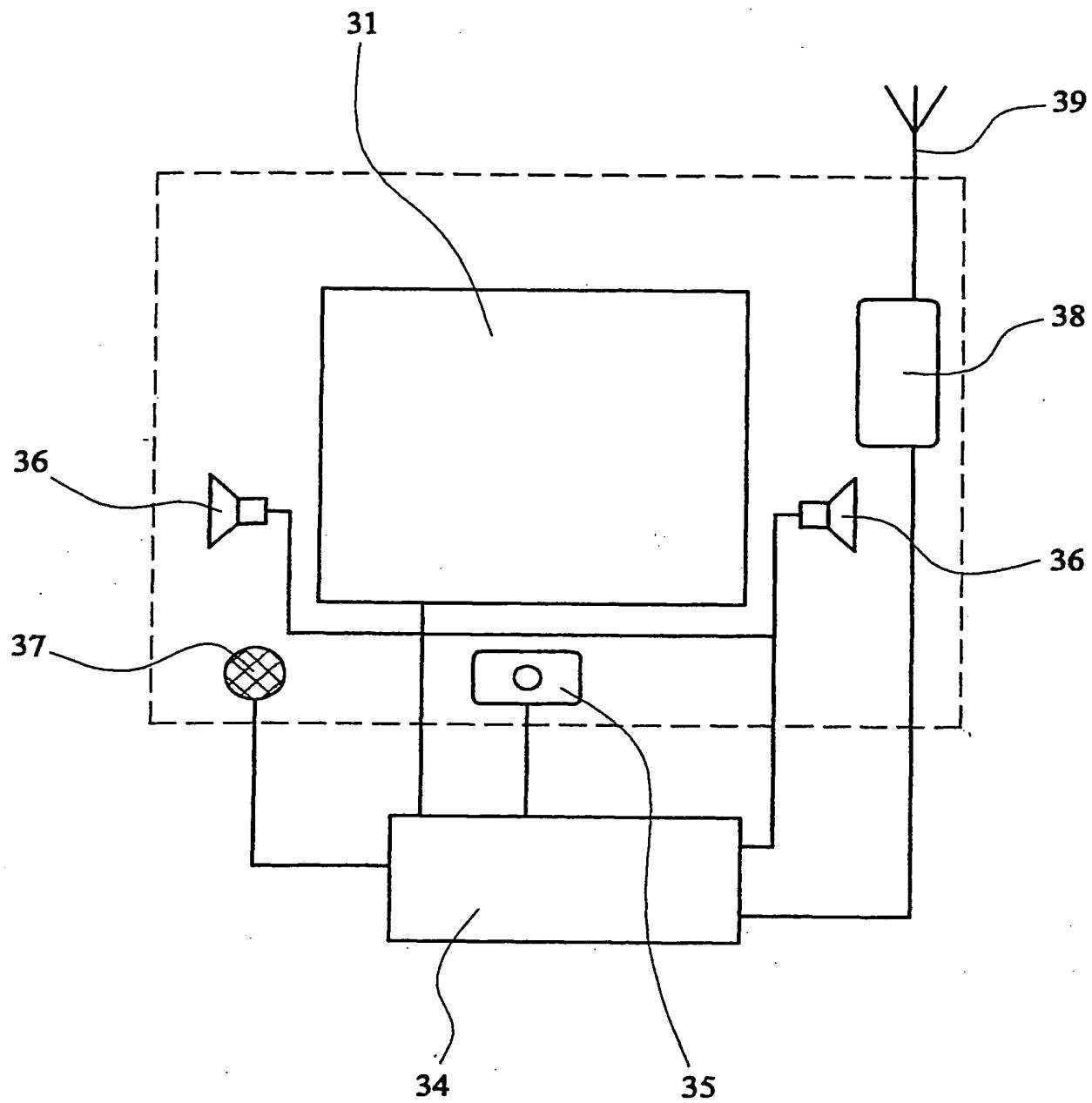


FIG. 7

-6/6-

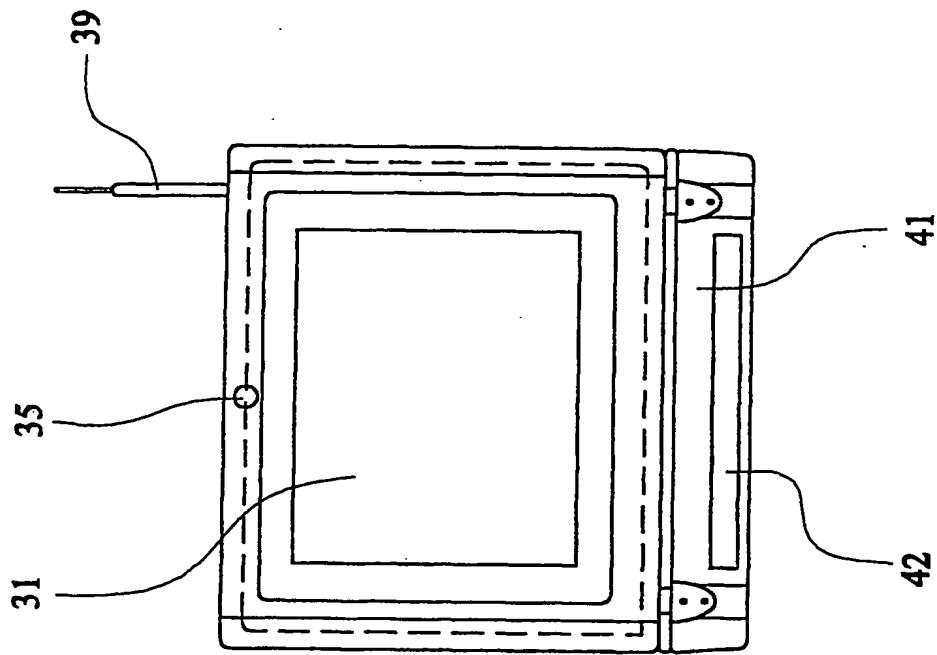


FIG. 9

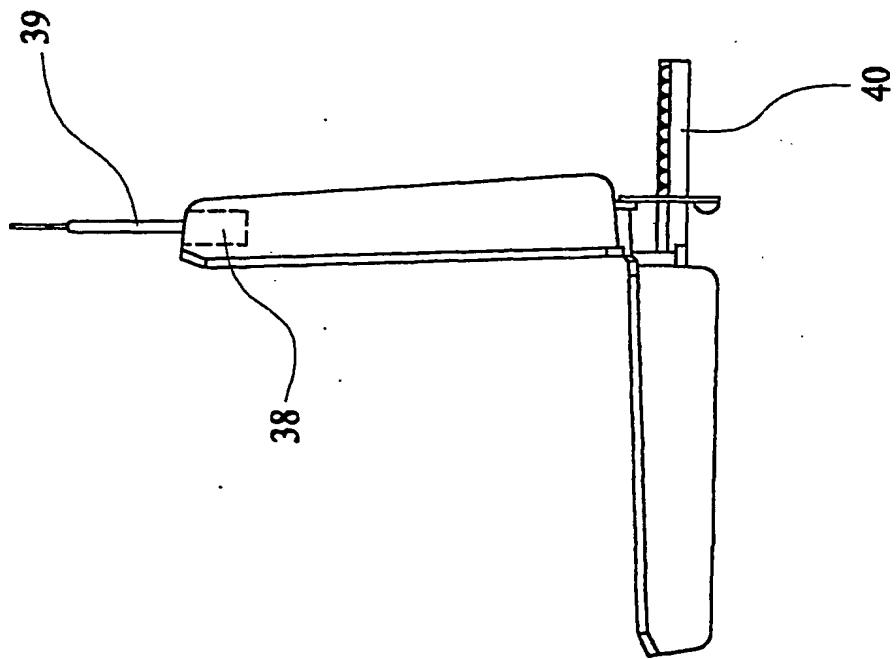


FIG. 8

INTERNATIONAL SEARCH REPORT

Internal	Application No
PCT/GB 01/00211	

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F1/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

PAJ, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT
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Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 98 52116 A (CHASE ADVANCED TECHNOLOGIES LTD.) 19 November 1998 (1998-11-19) cited in the application page 10, line 29 -page 14, line 15; figures 1-3 --	1-7, 12, 14
Y	DE 196 37 854 A (HEINZEL) 27 March 1997 (1997-03-27) column 1, line 6 -column 2, line 44 column 3, line 59 -column 5, line 50; figures --	1-7, 12, 14
Y	US 5 440 502 A (REGISTER) 8 August 1995 (1995-08-08) column 5, line 3 - line 45 column 6, line 23 -column 7, line 52; figures 1-3D --	4, 5
A		8
		-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Internal Application No	PCT/GB 01/00211
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 0 791 878 A (INTERNATIONAL BUSINESS MACHINES CORPORATION) 27 August 1997 (1997-08-27) column 2, line 26 -column 4, line 37 column 5, line 47 -column 6, line 1; figures 1,2 -----	3

INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern: Application No

PCT/GB 01/00211

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